

BOOK OF ABSTRACTS FROM

**7TH INTERNATIONAL MOUNTAIN
AND OUTDOOR SPORTS
CONFERENCE**

Faculty of Physical Education and Sport
Charles University in Prague, Czech Republic

20th - 23rd November 2014



7th Mountain and Outdoor Sports Conference

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Prague, Czech Republic

Topics:

1. Health aspects of outdoor activities
2. Learning and education through outdoor activities
3. Outdoor activities in socio-economic contexts
4. Environment and sustainability of outdoor activities

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Organisers: Department of Turistika, Outdoor Sports and Outdoor
Education, Charles University in Prague, Faculty of Physical
Education and Sport

November 2014

PROGRAMME

Thursday 20th November

18:00 - 20:00 Registration and small refreshment

Friday 21st November

8:00 - 8:30 Registration

8:30 Official opening of the conference, room P6

Learning and education through outdoor activities

9:00 *Keyspeaker: Pete Allison*

9:30 T. Potter: Journeying toward a discipline: Exploring the status of outdoor education

9:45 U. Dettweiler: Teaching science in an alpine setting. Understanding some core factors influencing pupils' motivational behaviour

10:00 W. Meulenbergs: Where does our training lead to? About the shift in paradigm in alpine-trainings

10:15 I. Martínková: Values of dangerous sport

10:30 - 11:00 Coffee break

11:00 *Keyspeaker: Colin Beard*

Experiential learning: towards a multi-disciplinary perspective. The doctrine or the wisdom?

11:30 S. Andkjær: The solotrip – different pedagogic aims and values, new methods and concepts

11:45 S. Kennedy: Social organisation in an expedition setting

12:00 I. Jirásek: Sailing through south Pacific: vastness category as a symbol of spirituality

12:15 M. Hanuš: The impact of the winter course experience in the context of the participant's life story

12:30 M. Lindner: Waldeinsamkeit (Woods solitude) – The woods as a space of reflection

12:45 - 13:45 Lunch break – dining room

14:00 - 16:00 Social programme – walk, climbing, bike, rope park

16:00 - 16:30 Coffee break

16:30 Invitation for workshops

Environment and sustainability of outdoor activities

16:45 *Keyspeaker: Eduard Ingles*

17:15 J. Dlouhý: Using environmental indicators for evaluation of sustainability of outdoor sports

17:30 - 18:30 **WORKSHOP: Colin Beard**

18:30 Dinner

19:30 - 20:30 **WORKSHOPS:**

- 1. J. Parry, P. Allison** – Ethics
- 2. T. Potter, M. Boyes** - Effective outdoor leader decision-making: Between intuition and analysis

Saturday 22nd November

Health aspects of outdoor activities

9:00 *Keyspeaker: Jo Barton*

Green Exercise: Health Benefits of Outdoor Activities

9:30 J. Wooller: Contribution of sight, sound and smell to the green exercise effect

9:45 S. Andkjær: Places for active outdoor recreation

10:00 M. Rogerson: Predicting green exercise health outcomes: ecologically valid sampling at parkrun events

10:15 J. Středová: The significance of mundane outdoor activities in everyday life

10:30 - 11:00 Coffee break

11:00 V. Bunc: Health benefits and risks of outdoor activities

11:15 G. Liedtke: Nature: a research project for lifestyle change and stress reduction

11:30 M. Hickman: Re-imagining outdoor sports as a public health resource: a small case study of climb

11:45 J. Baláš: Sport climbing in health related programmes

12:00 Invitation for workshop: **E. Katting, K. Johansson** – Presentation of the project (Outdoor education for developing methods for integration through nature and culture)

12:30 - 13:30 Lunch break – dining room

13:30 - 14:30 WORKSHOPS:

- 1. H. Smudlers** – Defining the „Outdoors“ and positioning the outdoor sector in the EU
- 2. E. Katting, K. Johansson** – Presentation of the project (Outdoor education for developing methods for integration through nature and culture)

14:30 - 15:00 Coffee break

Outdoor activities in socio-economic contexts

15:00 K. Weekes: Stressors and Coping of Elite Ultra-Endurance Mountaineers

15:15 A. J. Martin: Outward bound in New Zealand: 1962- 2012

15:30 R. Tuula: Recreation management study programme graduate's evaluation on professional occupation and competencies

15:45 I. Pawelec: Risk taking propensity in downhill mountain bikers

16:00 J. Neuman: Outdoor research from Czech Perspective

16:15 L. Vomáčko: The motivation to selected outdoor sports

16:30 - 17:00 Coffee break

17:00 M. McClure: ENOS – European network of outdoor sports

17:15 - 18:00 1. **POSTER section**

17:30 - 18:00 2. **Laboratory TOUR**

F. Bourassa-Moreau - Computer connected force platform performance assessment and training tool for rock climbing

19:30 **Closing banquet**

Sunday 23rd November

Optional programme:

1. Guided walk tour in Prague
2. Guided bike tour in Prague

Learning and education through outdoor activities

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The purposes and processes of outdoor experiences are the source of ongoing confusion and debate. In some literature the approach is to focus on the aims or outcomes of such experiences (e.g. personal development, environmental behaviour change, social justice) while in other literature the focus is on the learning process (constructivist, student centered, experiential). In some literature the two are mixed and unclear. These ways of thinking influence practices and the assumptions upon which we proceed with many aspects of our work. Awareness of how we think is important in understanding and refining our research and practice. In recent years the ways we think have continued to be politically influenced and outdoor educators can be seen as policy surfers. Looking to historical figures is helpful in making sense of what we do and how we think. Kurt Hahn, arguably the grandfather of outdoor education, developed a sophisticated philosophy of education which can help us to make sense of our own values and beliefs, practices and research.

Journeying toward a discipline: Exploring the status of outdoor education

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²Faculty of Education, University of Tasmania, Hobart, Australia

Background

Despite the debate in the literature as to what exactly constitutes a discipline, we believe, as others do, that there is merit in being a discipline (Loughran, 2009). Generally, disciplines hold greater respect than areas not deemed to have reached discipline status. Loughran (2009) explains that being aligned with the term 'discipline' can lead to "greater acceptance, enhanced academic standing, importance, and prestige" (p.193). As such, since this presentation explores the discipline status of outdoor education, it stands to have importance for the outdoor education area, as with respect follows value and often resources. Whilst we believe there is merit to being a discipline, we also do not wish to offer a definitive 'answer' as to whether or not each component of the Discipline Model (Liles, Johnson and Meade, 1995) is satisfied by the current 'state' of outdoor education. Rather, we hope this presentation will invite delegates to consider each component from their own lived experience and to engage in and with our ideas and provocations.

Case report

At a time when outdoor education struggles for social currency and collective value, this study critiques the field and explores 'if' and 'how' outdoor education has reached discipline status. Using Liles, Johnson and Meade's (1995) six-component Discipline Model as a framework for analysis, we investigate: 1) outdoor education's focus of study; 2) its worldview or paradigm; 3) its active research or theory development agenda; 4) its set of reference disciplines; 5) its principles and practices; and 6) the deployment of education and promotion of professionalism within it. Our hope is that this presentation will encourage delegates to deliberate the arguments that arise as a consequence of assessing outdoor education as a discipline. In doing so we hope to challenge the conceptualisation of outdoor education in innovative ways and stimulate critical discourse to strengthen the field so that it may realise its potential to best serve society. A discussion of the implications of these analyses juxtaposed alongside the Discipline Model and the challenges and opportunities that lie ahead for outdoor education in the context of being a discipline conclude the presentation.

References

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- Loughran, J. (2009). Is teaching a discipline? Implications for teaching and teacher education. *Teachers and Teaching: Theory and Practice*, 15(2), 189-203.

Teaching science in an alpine setting - Understanding some core factors influencing pupils' motivational behaviour

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Aim

This paper presents data from a pilot study (n=84) examining aspects of learning psychology of an outdoor science teaching programme in biology and climatology. The programme is curriculum-related and conducted in a high alpine region. The pedagogical intervention consists of a preparatory phase at the home school, a six-day residential stay at the Student Research Centre in Berchtesgaden (Germany), and two three day expeditions into the National Park Berchtesgaden.

Methods

In order to compare the motivational behaviour of the pupils in 'normal' science classes and the outdoor environment, we use data from qualitative explorations into the pupils' learning motivation during field observation in order to understand quantitative measures taken by questionnaires. Those include data from Self-Determination Indices (SDI), the Practical Orientation (PO) of the programme, as well as a self-assessment questionnaire with respect to well-being in the group, physical aspects, and general perceived enjoyment of the programme.

Results

Our data suggests that lower self-regulated pupils in 'normal' science classes show a significantly higher self-regulated learning motivational behaviour in the outdoor educational setting ($p < 10^{-4}$), and that the outdoor-teaching has generally been perceived as more practical than teaching in the 'normal' school context ($p < 10^{-4}$). We can furthermore show significant correlations of those pupils who felt good within the group or were having fun at the hiking-part with self-regulated learning in the outdoor setting ($\rho = 0.41$, $p < 10^{-4}$). However strenuous the hike has practically no effect on the pedagogical outcomes ($\rho = -0.03$; $p = 0.82$). We will provide in-depth analyses of all quantitative findings and qualitative data and explain the findings with respect to the statistical interpretation.

Conclusion

We conclude that expeditionary programming in alpine areas appears to be a suitable tool to trigger interest in science in youngsters, especially for less motivated pupils. Our findings blend well with data from recent studies in motivational behaviour with respect to out-of-class-room teaching.

Where does our training lead to? About the shift in paradigm in alpine-training

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Abstract

The high mountains are an adventurous terrain, full of risks and even dangers. Modern techniques, good equipment and proper training have made it possible for almost anyone to go up there, to enter this beautiful environment. Yet - or thus - I see more and more dangerous situations and even accidents. In this presentation I will first illustrate some particular situations I ran into during the last few years. And will ask: why did this happen this way? How is it possible that people with 'proper training' and modern equipment still got into this mess? Could it be that due to these trainings and equipment, people underestimate the force (and danger) in the high mountains? In many cases, I believe, this is the case. Men seek 'thrills' in the 'wilderness' up there in the mountains, but think – and expect – that this 'wilderness' is tamed, civilised. They rely on comfortable lifts and huts, count on marked trails if not full-plotted GPS-routes, trust in hooks and wires they find on the walls, blindly believe that their 'avalanche-safety-set' will protect them for avalanches, and in the end count on the helicopter-rescue to get them 'out of there' whenever needed/wanted (one press on the mobile-button should be enough. No wonder that accidents happen, no wonder people are surprised when the mountain in the end turns out to be a little bit more *wild* than they expected. As alpine-instructors, guides and mountain-clubs, we have a major responsibility in this. It is up to us to choose either for a mountaineering that sees the mountaineer as a consumer ('client') who just 'takes all he can get' (and pays for it accordingly) and thus wants (the illusion of) full safety (a comfort) to the very end. In this old-school view we adapt the mountain to our needs, or for a more responsible approach helping to make the mountaineer really understands the mountains and adapt his behaviour according to it.

With the International Friends of Nature, we actively plead for this shift in paradigm both in the logistics of mountaineering (huts, trails, transport, etc.) and in the training/education of (aspirant) mountaineers. We do not want more comfort in the huts, but less. We do not need more marked trails nor more holds and iron wires on mountain-walls, but less. We want to let people feel what nature is (including for example, not having enough water available for an every-day shower!) and see what nature is (for example, one sees far more on a map than on a GPS!). We need training that make people conscious of (the risks in) the mountains, that do not make them think that they are 'invulnerable' when they carry some high-tech devices or have learned to handle a 'proper' technique. We want training in which people learn that *less is more*. For example, a lower mountain, climbed *by fair means*, can give better feelings than forcing yourself up a higher one. We like to call it *slow mountaineering*. I will illustrate these ideas with some good practice:

- 3 x 3 Method of Werner Munter (www.slf.ch)
- Risk-box (www.sac-cas.ch)
- TWITG-training (The Way Is The Goal, www.iynf.org)
- 7Summits project (www.bergstijgers.org)

Values of dangerous sport

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Abstract

This paper develops Russell's (2005) discussion on values of dangerous sports (many of which are sports practised outdoors), enriching it with a phenomenological approach to human existence, based on Heidegger's work *Being and Time*. It discusses value of self-affirmation, which has been identified by Russell (2005) as a value of dangerous sport, from two points of view: a) our usual everyday understanding, and b) a phenomenological understanding that contributes to philosophy with its in-depth analyses of human being. An important aspect of these two different views of the value of self-affirmation is the understanding of the phenomenon of death, in our everyday usual interpretation as opposed to Heidegger's notion of "Being-towards-death". It is concluded that the phenomenological understanding of the value of self-affirmation can be seen as enriching for understanding values of dangerous sport, enabling a more adequate approach to this kind of activity.

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Key words: Dangerous sport, death, Heidegger

Experiential learning: towards a multi-disciplinary perspective

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Abstract

Whilst experiential learning (EL) has spread across the globe, influencing and being influenced by incursions into and across numerous fields and disciplines, including outdoor learning, problematic issues remain concerning definitional and boundary parameters. For some this is not seen as a weakness: the elusive and insurgent nature of EL resists the homogenising grasp. While addressing these issues this paper sketches a brief lineage, establishes evidence identifying major tides and smaller undercurrents of change. Substantive shifts towards a new revisionary postmodernism, a new ecological fluidity, are identified. This evolving holistic thinking embraces rather than replaces earlier thinking. The paper concludes by introducing new modelling that attempts to mirror and embrace this ecological multi-disciplinary complexity and fluidity.

The solo trip – different pedagogical aims and values, new methods and concepts

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Background

Solo trips in nature are used in many pedagogical contexts with different aims, methods and groups. Often the aim is to develop self-efficacy and competence in young people with a focus on personal development. Methods and concepts are developed and designed by instructors and often involve challenging trips in remote wilderness areas. Solo trips however can be connected to the Nordic tradition of *friluftsliv* and focus on a more place-based relationship to nature and landscape involving a more transformative leadership style and pedagogic approach. The concept draws from historical roots of solo trips and expeditions and can lead to more holistic personal development and be related to theories of directed attention and health.

Aim

The aim is to examine the experiences and effects, as well as the pedagogic possibilities, of solo trips. This case study examines a group of young people (26 PE-students) participating in a solo trip. The trip involves preloading participants followed by a 3-day solo trip in a forest-area in Denmark. After the trip the participants write reports and essays on their experiences. Essays from students are analysed qualitatively according to content and expressions.

Results

The participants generally express that the solo trip was a good experience without fear and anxiety yet challenging in different ways. Many students were challenged partly by the practical techniques needed (i.e. orienteering) and partly by being alone without communication with others. Quite a few participants experienced a new attention and feeling towards nature and some of the students used this attention or feeling to express themselves in a creative way (i.e. drawing or writing poems). Perception of time seems to be a crucial theme in the participants experiences and reflections. The trip made them reflect on their routines, habits and daily life, especially their use of communication and electronic devices. The study indicates that there might be a difference in men and women's perceptions and experiences of being alone in nature.

Conclusion

A solo trip in nature is not one concept. Depending on the group and the pedagogical aim it is possible to focus on different values. Letting participants decide themselves upon the focus and values as well as involving them in the planning process can open up new experiences and learning outcomes. Solo trips have potential for holistic personal development as well as to focus on a healthy lifestyle. Preloading and structured reflection after the trip is important in achieving development and learning outcomes.

Social organisation in an expedition setting

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Aim

The aim of this study was to explore the social organisation and adventure experiences within a sea kayaking expedition setting. Expeditions typically require members to fully immerse themselves in the expedition setting, over a set time-frame, most often with fellow adventurers who share a common end goal. Varley (2011) refers to this world of the sea kayaker as a singular liminal space, where participants, far removed from their everyday lives, can re-engage with themselves and with others in a unified, animated and spiritual *communitas*. This study explored such *communitas* by probing not only the emic experiences of the expedition members within the expedition setting, but also through the subjective deconstruction of the investigator as an expedition member, fellow adventurer and researcher.

Methods

The fieldwork was carried out in June 2014 during a sixteen day sea kayaking expedition along the Dalmatian Coast of Croatia. Both ethnographic and auto-ethnographic data were gathered. Female expedition members (N=3) were interviewed individually pre, during and post expedition. They also participated in a focus group setting during the expedition. Interviewing throughout the expedition ensured ecological validity (Robson, 2011) while concurrently avoiding issues of recall bias (Rose & Parfitt, 2012). The researcher engaged as a full expedition member, recording a subjective and self-reflexive narrative of the lived expedition experience. Whilst some recordings were done on shore, the ethnographic and auto-ethnographic data were primarily recorded on the water as the expedition members paddled their 500 kilometre route.

Results

For the adventurer, expedition time provides a unique life space, relatively free from the pulls posed by the quotidian structures and social obligations of one's normal routine. It is through such distancing that the mind is ultimately released from the ordinary into an alternative, liminal space that is conducive to a re-engagement with the self and with others (Simmel, 1911; Varley, 2006; Yengoyan, 2006). Within this space, expedition members organise themselves socially and this study proposes that each individual member is impacted by what the author terms, the 'expedition gradient'. As an expedition proceeds, members will fluctuate in their preparedness along four main inter-related dimensions that make up the expedition gradient: (i) adaption to the new environment (ii) new social arrangements (iii) psychological state, and (iv) physical ability to perform. A harmonious state emerges for the individual when members are closely aligned (clustered) along each of these dimensions.

However a more negative state may emerge for the individual when there are significant differences in alignment between members. If the gradient between those that thrive along the four dimensions and those that do not steepens significantly, the expedition team is more likely to lose its harmonious state.

Conclusion

Being conceptually aware of one's position and relative state along the expedition gradient could enhance one's overall expedition experience and deepen one's understanding of the impact of both social coherence and individualism in an expedition setting.

Sailing through the South Pacific: Vastness as a symbol of spirituality

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Aim

The research focused on trans-ocean sailing shows some spiritual connotation in participants' experience (Lusby and Anderson, 2010), an opportunity for learning in the practical and cognitive domains (McCulloch, McLaughlin, et al., 2010), but also as a metaphor for spirituality (Kibble, 2003; Waaijman, 2013). What kind of spirituality is visible in long distance sailing? Are there any features of this kind of spirituality? The goal was to investigate the 'vastness', as a specific ontological and anthropological characteristic of trans-ocean sailing, on an actual journey from New Zealand to the Falkland Islands around Cape Horn.

Methods

This paper analyses the diary of a participant on board the Dutch ship *Oosterschelde* and use the hermeneutic method for deeper understanding of such experience.

Results

'Vastness' is declared as a specific category of trans-ocean sailing, which support understanding of such travelling in a framework of non-religious pilgrimage. The traveller stays in profane (secular) dimension of the world, without transcending into sacred (religious) dimension, so it is not religious pilgrimage. On the other side, the traveller has a chance to go in his/ her thinking much deeper with reflection of inner values and purpose of life, to transcend everydayness into a vertical sphere of human being, to live accordingly to high ideals and deep ideas. It is possible to meet with him/ herself in an authentic way of being.

Conclusion

Long-distance sailing as a kind of travelling is not ordinary tourism, but rather can be characterized according to certain specific features of non-religious pilgrimage.

The impact of the winter course experience in the context of the participant's life story

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Aim

The objective of this empirical study is to evaluate the impact of the winter course experience on the participant's personality in the context of his/her life story!

Research questions:

1. What the winter course experience meant for the participant in terms of his life story?!
2. How the participant evaluates the winter course experience in the interval of 10 years?

Methods

The methodology used was an Interpretative Phenomenological Analysis (IPA). This is a qualitative research approach committed to the examination of how people make sense of their major life experience. IPA recognizes how participants evaluate their experiences in life, especially when something important has happened in their lives. The methodology involves the researcher trying to interpret sense and values of experiences for participants - motives: *in order to achieve (certain goal)...* and *because (...something external leads him/her to it...)*. IPA is:

- phenomenological in that is concerned with exploring experience in its own terms.
- idiographic - concerned with life experience, describing in its own expression rather than in pre-defined categories
- based on hermeneutics - process of understanding and interpretation. One's understanding of the text as a whole is established by reference to the individual parts and understanding of each individual part by reference to the whole.

The Research Plan

To conduct individual semi-structured interviews with participants of the winter course *Život je gotickéj pes* 2004; selected to provide a time delay of 10 years from the experience (sample of 10 participants). The research will be conducted in 2015-2016.

Conclusion

These winter courses are a new phenomenon in Czech Experiential Education and no research has been done so far in this area. Reflection on the winter course experience, with a delay of 10 years in participants' life story provides very unique observations.

Waldeinsamkeit (Woods solitude) – The woods as a space of reflection

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Students of the Masters course *Abenteuer und Erlebnispädagogik* (Adventure and Experiential Pedagogy) at the University of Marburg are offered the opportunity to participate in a three-day course focusing on the theme of "the woods as space for reflection - woods solitude". The intention for the lecturer is to look for places that are structurally suitable to encourage processes of self-reflection and self-realisation and thus give participants the opportunity to gain insights into themselves. Referring to the anchorites who withdraw from the community and went alone into the forest or into the desert this course is not conducted as a group activity but as an individual activity; the students are asked to hike alone through a certain area of the woods and spend two nights and one day at one place in the woods. The content design consists of the following elements:

- Solo walk from a freely chosen place to a group meeting point (about 4-6 hrs)
- Meeting in the late afternoon
- Looking for a suitable place to spend the night (in the vicinity of about 4km)
- Staying alone at this place (two nights and one day)
- Review and return to Marburg

Research description

In order to arouse the students' self-determined interest in the course, they could freely decide whether to participate or not. During the preparation phase only the organisational frame (time and place) is presented and associations with the title of the course are worked out. No further tasks are given. Students are asked to bring only their most necessary personal items and also their (obligatory) diary. They are not to stay in tents but in bivouac (tarp if necessary). However, one can only partly speak of free choice because the organisational framework is predetermined; this of course does not constitute active initiation. After a breakfast with all students together on the third day, the students are asked to write reports relating to the points of choice of location, description of location, thoughts and activities during their solo. Contributions are voluntary and they are to be handed in within three days of the end of the solo activity, written in an anonymous form.

Conclusion

As we can see from the structural description, the wood is an ambivalent space full of challenges but also of quietness and of concentration. We also can see from the descriptions of the students that the perception of a space of a landscape is essential. The objective structure of a space is closely connected with the emotional perception of mankind. What seems to be wide for one person is perceived by another as only just adequate or even as restrictive. It depends on the psychological state of a person and his/her needs at this time. Conversely, the character of the space surrounding the individual also has an effect on his mood. Thus we have a reciprocal influence.

Management strategies for the sustainable development of sport practice in natural environments

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Abstract

The presentation focuses on the analysis of sport management strategies used in natural protected areas. Its main aim is to present the identification of sports management strategies used by the stakeholders involved. It attempts to analyse the optimal characteristics of the established mode of governance and the crucial factors to achieve the highest degree of sustainability for the development of the selected areas. To do so, the strategies used in conflict situations experienced in 4 real Catalan natural areas were analysed, through the study of the salience of the stakeholders involved, the relationships established between them and the processes of collaboration generated.

Results of the study showed that the characteristics of the context, the balance in the notability of stakeholders with conflicting interests and the existence of a high degree of connection and collaboration between them, determine the establishment of a particular mode of governance. Therefore, these factors are crucial for the achievement of a greater or lesser degree of sustainability in the development of the territory. In all cases, in addition, we have observed that the specific strategies used by stakeholders have considerably conditioned this achievement.

The final result of the research is the definition of a set of strategic guidelines for an optimal sport management of natural areas in order to achieve the highest level of sustainability of their development, so that it can be applied to a large number of natural areas in similar situations.

Keywords: Governance, stakeholders, sustainable development, sport, natural environment.

Using environmental indicators for evaluation of the sustainability of outdoor sports

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Aim

The concept of sustainability is often mentioned in sports development policy and practice. Despite this ubiquity, there remains a lack of clarity in practical understandings of this concept. Moreover, research on sport and sustainability is limited and lacks theoretical underpinning. (Lindsey, 2008) We found a lot of studies oriented to the influence of outdoor sports on nature (some very old) (Abbott, Newsome, & Palmer, 2010; Bates, 1935; Douglas, 1990; Frissell & Duncan, 1965; Meinecke, 1928), some on economy (Chernushenko, 2001) and social questions (Lawson, 2005), but complex research does not exist. In our work we have looked for possibilities to use methods, which are already used in measuring sustainability in other research spheres.

Methods

A literature review found similarities with sustainability research for tourism activities where there were developed methodologies and indicators to assess sustainability (V. Castellani & Sala, 2008). The most interesting method for our research was found in connection to the Ecological Footprint and Life Cycle Assessment (Valentina Castellani & Sala, 2012).

Results

Differences in sustainability research for tourism activities and outdoor sport activities are discussed, proposing the use of the LCA method and the calculation of the Ecological Footprint. Some calculations can be used without modification – i.e. calculation of the Ecological footprint of transport, other calculation have to be modified more, i.e. calculation of LCA of accommodation in some of the sports - i.e. accommodation in orienteering sports where existing accommodation capacities are used or very specific type of accommodation is used (hard floor accommodation in gyms or temporary camping places at the competition centres). For the Ecological footprint of transport the calculations were done for two national events. Results are compared with some results of the tourism activities.

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Effective outdoor leader decision-making: Between intuition and analysis

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Background

The value of the outdoors to society is usually best realised through well led nature-based experiences. Effective outdoor leadership is contingent upon a myriad of successful and often complex decision-making processes that affect the quality, educational value and safety of an excursion. Based on a number of factors, such as institutional and group goals, risk level, time pressures, and the age and experience level of participants, leaders must make decisions on innumerable elements, such as: When and where to camp? The best route to follow? If behind schedule, if and how to alter the route? How to descend a steep slope safely? How to maximise outdoor learning and environmental care? The number of consideration factors multiplied by the number of decisions required, makes effective decision-making a rather multifarious and seemingly overwhelming process. So how do successful outdoor leaders excel in this critical and complicated process? What decision-making methods do they use? How can we learn from them and pass this knowledge on to aspiring outdoor leaders? The outdoor field is not well served with clear agreement on the way leaders make decisions, with some arguing for processes, where leaders draw on considerable experience to make intuitive decisions, through to advocates of a rational decision process based on analysis and deliberative reasoning. This distinction is further confounded by the conundrum about the best ways to train future outdoor leaders knowing that a beginner lacks the experiential base on which decisions are made.

Case report

Based on interview data from highly experienced outdoor leaders, this presentation aims to examine the kinds of decisions that outdoor leaders make and the processes by which they use in a normal day's work. Furthermore, the leaders' decisions will be critically scrutinised to determine if they employ an intuitive, analytical or combined approach. Our argument is that leaders are reflective decision makers who employ a wide range of strategies that are intuitive and/or analytical, and highly dependent upon the nature and context of the situation. A discussion considering implications for practice will conclude the presentation.

Green exercise: Health benefits of outdoor activities

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Abstract

It is well documented that engaging in regular physical activity improves health and well-being. There is also evidence to show that exposure to nature enhances psychological health. The 'Green Exercise' (GE) research programme explores the relationship between the environment and human health. Over the past eleven years, it has provided growing evidence of the synergistic health benefits of participating in physical activities in green spaces. A number of research approaches have been adopted including simulating GE in the laboratory, field studies and evaluating nature-based activities for external organisations.

Research findings show that an acute bout of GE reduces stress and anxiety, improves mood and self-esteem, reduces blood pressure, improves heart rate variability and alters autonomic function during recovery from a stressor. Green spaces promote physical activity, facilitate social contact and encourage intergenerational activities, which all have implications for health and wellbeing. There seems to be universal health benefits for all types of green spaces and activities. However, dose-response relationships for GE participation show that an acute bout of light-intensity exercise has the biggest positive response. Individuals experiencing mental ill-health also receive the most gains, suggesting that GE has therapeutic properties and could be used as an effective health promotion tool.

Future research will explore the underlying mechanisms of GE and how it can be used as a vehicle to drive behavioural change. Research studies will also explore the impact of GE on sleep quality, the efficacy of GE as a treatment option for adults with mild-moderate depression and cardiovascular health outcomes for older individuals. The research findings have far reaching implications for both public health and environmental policy agendas at a local, national and international level.

Contribution of Sight, Sound and Smell to the Green Exercise Effect

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Aim

Research shows that exercising whilst viewing or being in the presence of nature is more beneficial to psychological and physiological wellbeing than exercise alone. However it is not clear why the exercise environment is beneficial and what are the underlying cognitive mechanisms. Limited research has looked at the effect of colour, specifically green, as a potential cognitive mechanism. Research has looked at the effect of stimulating the senses, but not looking at their contribution and role in the Green Exercise effect. The aim of this study is to identify the roles of sight, sound and smell as potential underlying cognitive mechanisms of green exercise.

Methods

Twenty nine healthy participants Males (n=15) age = 24.2 ± 6.4 years; Females (n=14) age = 27.0 ± 10.5 years, completed this mixed design study. Participants were randomly assigned to one of three groups: Visual (VI), auditory (AU) or olfactory (OL). The group dictated which sense the participant would have occluded during the study, whilst still being exposed to the other two senses. Visual stimulation was a video simulating a ride through woodland. Auditory stimulation was the sound of birdsong and olfactory stimulation was the smell of pine trees. Mood was assessed immediately on arrival to establish baseline (BL) mood. Each participant then performed a five minute cycle ride on a cycle ergometer, at 40% peak power output, whilst having all of their senses available. Rate of perceived exertion (RPE) was recorded in the last ten seconds of the ride. Heart rate (HR) was recorded throughout. At the end of the exercise bout mood was assessed again. After this, another five minute cycle ride was completed, identically as above except the participants had their assigned sense occluded. Each of these conditions were repeated alternately three times always starting with full sensory (FS) followed by Occluded (OC).

Results

A mixed ANOVA was conducted to compare the effect on Total Mood Disturbance (TMD), when occluding the individual senses of sight, sound and smell, using mean scores for each condition and group. Analysis showed a significant interaction between condition (BL, FS and OC) and group (VI, AU, OL), $F(2.735,35.56)=4.119$, $p=0.015$, partial eta squared=0.241. Post-hoc comparisons, showed a significant difference between the AU group, when compared to the other groups, $p=0.007$. Occluding the senses was detrimental to mood in all groups, but only significantly so in the AU group. RPE was significantly higher in the OC condition, $p<0.05$, compared to FS. Group analysis found a significant increase in RPE between the AU and VI group, $p<0.05$ only. HR was higher in the OC condition compared to the FS experience irrespective of group, $p<0.05$. No significant differences were found between groups.

Conclusion

The negative effect of auditory system occlusion on mood during Green Exercise, compared to previous research using the full sensory experience, would suggest it as an underlying cognitive mechanism of Green Exercise effect. Implications for the use of nature sounds to improve mood in a variety of situations are wide and far reaching.

Places for Active Outdoor Recreation

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Background

Research indicates that physical surroundings, landscapes and outdoor facilities have a positive impact on people's participation in active outdoor recreation. Changes in the physical environment may be even more effective compared to pedagogical actions and campaigns. Research in Nordic countries generally has paid little attention to people's preferences and experiences of places related to their activity and to their motives for being active in the outdoors.

Aim and methods

This multi-case-qualitative study, *Places for Active Outdoor Recreation*, intends to analyse how and why these outdoor 'places' inspire participation and correspond to motives and needs for selected groups of users in Danish outdoor contexts.. Four cases have been chosen representing different types of landscape and facility for active outdoor recreation. Data collection methods involve both participant observation and qualitative interviews with focus groups involving families, trail-runners, MTB-riders and kite surfers.

Results

The study shows that the physical environment is important to the users and participants. Landscapes and outdoor facilities though have different meanings to different groups in different settings. Families prefer facilities that make it possible for them to be together in the same area attending different activities. Playgrounds and trails that represent a challenge are important to different user groups i.e. kite surfers and MTB-riders. Most people seek places and landscapes that provide them with a feeling of being in nature, and this feeling can be present even in a cultural landscape. Sense of place and a personal involvement in the physical environment seems to be important as well.

Conclusion

The overall result is that experiences of, and views of, nature seem to differ between groups of participants in active outdoor recreation and that the motives for participation (experience motives) seem to be the key to understand differences and general patterns. The study provides valuable knowledge that can be used in planning and designing for active outdoor recreation with perspectives for improving health and quality of life, and points out new themes and issues that need to be investigated.

Predicting Green Exercise Health Outcomes: Ecologically Valid Sampling at parkrun Events

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Aim

'Green exercise' (GE) is physical activity whilst simultaneously being exposed to nature. Previous research suggests that additional exercise benefits can be obtained via selection of exercise-environment. GE comprises three physical components; the individual, the exercise and the environment; and one processes components encompassing a range of psychological and physiological processes. Offering opportunity for ecologically valid, field-based study of GE participation, an example of GE participation is 'parkrun' - a weekly, timed, 5 km run which takes place in public spaces, across multiple locations both within the UK and internationally. The current study examined influences of several physical component-related variables and one processes component-related variable, on psychological GE outcomes.

Methods

A convenience sampling was employed. Participants (n= 331) completed questionnaires pre- and post a 5 km run, across four 'parkrun' event locations in the east of England. These locations enabled comparisons between different typical GE environments (beach, grasslands, riverside, heritage). Questionnaires were composite, comprising standard international measures of self-esteem, perceived stress, mood, and nature-relatedness. Questionnaires also included bespoke menu-based questions regarding participants' primary motivation for attendance, membership of a running club, and run performance in relation to their expectation. Other factors relating to the climate, individual and the exercise performed were also measured via questionnaire and collected from the 'parkrun' website.

Results

Self-esteem ($\Delta = 1.61$, 95% CI [1.30, 1.93], $\eta_p^2 = 0.24$), stress ($\Delta = -2.36$, 95% CI [-3.01, -1.71], $\eta_p^2 = 0.139$) and mood ($\Delta = -5.25$, 95% CI [-7.45, -3.05], $\eta_p^2 = 0.07$) all significantly improved from pre- to post-run. Baseline scores and improvements in these measures were not significantly different between event locations. Although several component-related variables significantly predicted these improvements, they accounted for only 8.9% of self-esteem improvement, 1.9% of perceived stress improvement, and 8% of mood improvement.

Conclusion

GE offers accessible provision for improving public psychological well-being. A range of component-related factors (age, enjoyment of the run, slower 5km run time, sex and nature relatedness) independently predict benefits to psychological well-being outcomes of GE participation. However, via GE participation at a range of locations, individuals can universally obtain acute psychological

benefits. The results therefore support the importance of the processes component in attaining psychological GE affects. Additionally, informed comparison with existing research alludes that precise characteristics of a GE environment might be less influential at greater exercise intensities.

The significance of mundane outdoor activities in everyday life

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Aim

The aim of this study is the coherence of everyday life physical activity in outdoor environment related to psychological moods (valence, energetic arousal, calmness) and how is this relation moderated by self-concordance. Simple activities of short durations in everyday life of the participants like gardening, walking, bicycle riding and other leisure time activities were measured. To compare young participants with older adults, we examined two different age groups between 20–30 years and 50 years and above.

Methods

The most important goal was to access both physical activity and actual moods of the participants at the same time, at the current moment and directly in the situations of the day. Therefore we used the method of ambulatory assessment, which reduces recall bias and it also has a high ecological validity. We used an accelerometer to record physical activity and pocket computer to access the moods of the participants for 24 hours. An accelerometer from VarioPort was carried on the hip to record the movement of the whole body of the person. The handheld device Palm Tungsten E2 was equipped with an on-line questionnaire with a 6-item scale. The participants had to fill in their current mood, their mental status and how they felt at the moment of acoustic signal which was set and produced by VarioPort. The signal came every 40 to 100 Minutes during active and inactive episodes. At the end of the day, they had to fill out a questionnaire which gave feedback about the examination. The data was evaluated in multilevel models with the program HLM 6.5 and a multilevel analysis of 80 participants was proceeded. The results shows the differences between the two age groups.

Results

The analysis showed a positive coherence between mundane outdoor activities and mental status. It also proved a positive moderating effect of self-concordance. The more activity in everyday life, the better their mental status and all the participants felt more alert and full of energy. The higher the self-concordance of their activities, the greater is the coherence between moods and the outdoor activity in everyday life. The age group between 20-30 years also additionally felt agitated and tensed immediately after the activity when compared to the group 50 years and above.

Conclusion

Even small episodes of movement in the outside environment can enhance current mood. The more self-concordant the activities are, the greater we feel. Most people don't get the chance to go hiking in to the mountains or do outdoor sports, but we can use even mundane outdoor activities to improve our mental health.

Health benefits and risks of outdoor activities

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Abstract

Poor nutrition, in addition to an overall lack of exercise is one of the major issues of the current modern lifestyle. In addition to decreasing fitness and the reduction of everyday working conditions, as well as a drop in leisure activities, the most common end result is the increase in instances of obesity, an overweight general population overweight, and decrease of physical fitness level. The energy content of current nutrition in the majority western countries and the Czech Republic has been practically stable over the last two decades. The average daily energy intake of Czech citizens without regular physical exercise is about 120% of BMR. In contrast, the energy content during general, daily function during the same period decreases by about 30%. The basis of exercise regime interventions to influence obesity and actual fitness state is increasing the volume of physical activity (PA) regularly carried out.

When designing an exercise intervention one should always respect previous movement experience, current physical fitness level and movement competence. Movement competence should assess together the skill requirements and the state of muscles that insure specific physical activity. Lack of an exercise regime in people who are overweight or obese and/or lower level of actual physical fitness is often explained by lower movement assumptions for these people. It is true that many times these individuals have lower levels of motor skills as a result of mostly lower movement training, but an open question is whether they also have less muscle morphology, less quality of muscle mass, whether their muscle groups are less prepared to make the necessary physical activity.

Outdoor activities are one of the most commonly used tools to influence physical fitness level, reduce work stress, and overweight or obesity, lifestyle and health. Benefits are generally tied to the current level of subject's physical fitness, especially in terms of lifestyle diseases and reduction of psychological stress. Potential risks of these activities are caused by internal and external conditions. A substantial number of injuries during these activities are influenced by the internal conditions, physical fitness (preferably endurance and muscular fitness), movement capability and experiences. External conditions are influenced by the field surface quality and the athlete's equipment, especially for the implementation of physical activities in difficult terrain (skiing, climbing, etc.). When designing exercise intervention in the field it is always necessary to first solve the problem of health risks and secondly the benefits of the intervention.

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Naturess: a research project for lifestyle change and stress reduction

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Aim

The aim of this study was to investigate the effect of movement in nature and specific life-reflective tasks related to nature on perceived values and perceived chronic stress. Seel (1996) has developed the theory of aesthetic correspondence, stating that humans can recognise chances for a good and satisfying life in the aesthetic perception of nature. Liedtke (2005) expanded this theory by the aspect of lively correspondence where humans recognise their belonging and contact to nature. Initial evidence points to the possibility that experiences in nature can affect the otherwise very stable construct of perceived values (Hack, 2011; Liedtke, 2005). Values are “guiding principles in the life of a person” (Schwartz, 1994, p. 21) and therefore act as the internal base of human behaviour. The idea of this research project was to develop an intervention that would enable participants to reflect their own lifestyle and thus recognise positive as well as negative behaviour patterns.

Methods

Several groups were investigated (N=16). In each group, a number of 8 – 12 participants met for six times over a period of eight weeks. Each of the meetings lasted 2,5 hours. The intervention took place in a local park and was primarily carried out in the woods rather than on paths. Participants were asked to do a mental perception task in the first 30 min. of each meeting and then usually spent about an hour being in the woods for themselves. They were given tasks such as: “Find three places and reflect on the way that these places deal with you and your life”. Participants filled out the German version of the ‘Perceived Values Questionnaire’ with 40 items (Schmidt et al., 2007) and the ‘*Trierer Inventar zu chronischem Stress*’ (Schulz et al., 2004). They completed the questionnaires before, directly after, six weeks and 12 months after the intervention. Additionally, guided interviews were carried out six weeks and 12 months after the intervention.

Results

Significant changes were found for all dimensions of the ‘Perceived Values Questionnaire’ which cover power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, conformity, tradition and security. For example, the dimension ‘power’ changed by a mean amount of 0,53 on a scale of 1 to 6 after the intervention. This change was upheld 12 months after the intervention. Changes in the perceived level of stress were (due to the small group?) not significant.

Conclusion

Personal, motivational values are assumed to be stable patterns that show little change – at least at the age of adults. The current investigation showed that life-reflective tasks related to nature could

lead to a significant change in values or maybe better: a readjustment. Further investigations will take place to verify these results.

Re-imagining outdoor sport as a public health resource: a small case study of climbers aged 65+ **M. HICKMAN¹ , A. INKSTER² , L. FITZGERALD³**

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Aim

Currently, there are in excess of 10 million people in the United Kingdom aged over 65 with this number predicted to rise to 19 million by 2050. Comparative figures for the USA are just under 70 million at present rising to 80 million by 2050. A significant portion of the National Health Service budget in the UK is focused on older people with the Department of Health showing that costs rise steeply with the over 75s, often due to inactivity and social isolation. Although definitions of 'old age' are not consistent, within most contemporary developed countries 60-67 is the age at which people are eligible to withdraw from the labour force and claim associated social benefits. For the purposes of this study older adulthood was divided into three stages: 'young-old' (65-74 years), 'old-old' (75-84 years), and 'oldest-old' (85+ years). The aim of this study was to discover how outdoor sport, specifically climbing, is re-conceptualized as a public health resource by an overlooked and often forgotten section of the population.

Methods

The project used a purposive sample that was able to offer a meaningful perspective of what it means to be an active climber in 'young-old' age. Semi-structured focus groups were conducted with climbers (n=8) with an average age of 70.2 climbing regularly in the north of England. The focus was on what motivated people to continue climbing in their senior years, and in what ways participants thought that others in their age range could benefit from wider access to the activity. Themes were identified through manual data handling and internal and external checking carried out.

Results

Four main themes emerged: the maintenance of physical and mental health and fitness; maintaining social contact and avoiding social isolation; enjoying the natural environment; and, generating a meaningful identity. Climbing functioned as the motivator to remain strong, flexible, and to maintain a good diet in order to maintain muscle mass and bone density. Rock movement was perceived as essential to this outcome, as was walking into the crag with a loaded rucksack. These demands stimulated exercise on non-climbing days to support performance. Mental skills were recalled, practiced and reinforced through the memory and knowledge of crags, route selection, and the need to remain technically proficient with kit and equipment. Maintaining social networks to plan and go climbing helped prevent social isolation, create a sense of belonging and enhance self-image. Time to be able to enjoy the 'present' was a very strong theme enhanced by natural scenery and the touch

and feel of rock. However, for some, this was overcast with the sense of foreshortened futures. Climbing also helped shape storied lives that were purposeful and convincing, concentrated on friendships and looked forward to new beginnings. Teaching, inspiring and inter-generational connectivity were central to this theme.

Conclusion

This project identifies some of the ways in which the 'young-old' relate to the health and fitness benefits of rock climbing. Whilst indicating a need for further research it also highlights the potential for other older adults to benefit from this activity. Old age presents great challenges, however it also offers great opportunities that are in need of clear articulation in order to have maximum impact.

Sport climbing in health related programmes

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Aim

The aim of the study was to determine the association between the number of metres climbed per week and health oriented fitness.

Methods

A total of 257 male and 126 female climbers volunteered for the strength testing and completing a questionnaire. Twenty seven males and fourteen females from these subjects took part in the energy expenditure climbing assessment.

Results

The results showed a strong relationship ($R^2 = 0.45$) between the number of vertical metres climbed and grip strength in females, however, this relationship was not significant in males ($R^2 = 0.15$). A high level of association between climbing volume and the bent-arm hang was stated for females ($R^2 = 0.33$) and males ($R^2 = 0.27$). The average energy expenditure in vertical climbing was $0,594 \pm 0.077$ $\text{kJ}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ in males and $0,527 \pm 0,048$ $\text{kJ}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ in females, at the overhanging inclination $0,678 \pm 0,094$ $\text{kJ}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ in males and $0,579 \pm 0,056$ $\text{kJ}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ in females.

Conclusion

The results demonstrated that sport climbing may maintain or increase upper-body strength if climbing volume is around 80 vertical metres climbed per week. The energy cost of recreational climbing corresponds to other aerobic activities such as running, swimming or cycling. To maintain or to increase the cardiovascular fitness, a volume of at least 400-500 vertical metres climbed per week has to be completed.

Key words: sport climbing, energy expenditure, muscular strength

LINC – Outdoor Learning for Integration through Nature and Cultural Encounters

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Abstract

We are part of a project run by the European Union. The aim is to use Outdoor Education for developing methods for Integration through nature and culture:

<http://www.liu.se/ikk/linc/presentation?l=en>

Based on research on outdoor learning, it seems that practical methods could be more effective than traditional methods in introducing a new society to immigrants. Through experiential and place-based learning, the newcomers get the opportunity to first-hand experience natural and cultural environments. In order to get to know the new society, the whole body and all senses are involved in the learning process. Authentic environments and situations offer interplay between experience and reflection, which is likely to facilitate the integration process. We would like to present both the theoretical background and some practical exercises used in the project for at least one hour. This presentation and workshop can be interesting for both teachers and people working in NGOs with integration and group development.

Defining the 'Outdoors' and positioning the Outdoor sector in the EU

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Introduction

The European Confederation of Outdoor Employers (EC-OE) was established in 2008. From day one it was clear that the 'outdoors' was used as a concept to describe activities such as canoeing, mountain bike, sailing, survival, hiking, skiing, etc.. It was however, hardly understood that these activities were organised by many thousands of very small businesses and consequently provide for an income for even more thousands of people throughout the EU. The sector is diverse but has one central unifying theme; animating participants in outdoor environments while engaging in physical activities.

Methods

To identify the denominators that help to describe the 'outdoors' an empiric approach was used. Within the EC-OE partnership input was collected by means of brainstorming with the delegates of 8 European Outdoor Employers Federations. This brainstorming exercise was repeated several times at national employers meetings (Smulders, 2010). Parallel, through the support of EU Leonardo da Vinci funding, the sector defined the occupational map and functional map of an outdoor animator.

Results

A competency framework (EQFOA, 2008) led to the establishment of 42 learning outcomes that represent the skill-set of an Outdoor Animator in Europe (CLO2, 2010). Since 2012 EC-OE got more involved in other EU projects including the ELESA project (2013 – 2015): "European Learning Syllabus for Outdoor Animators". The ELESA project aims to develop a pan-European syllabus for the training of outdoor animators. The outcome of the ELESA Project will be a strong 'ready-to-use' product that higher and further education institutions, adult education and/or vocational training centres throughout Europe can use.

Conclusion

Defining the 'outdoors' and positioning the outdoor sector within the larger EU context of 'Sport & Active Leisure' is a continuous and dynamic endeavor. Fitting in to the European Qualifications Framework (EQF), the European Classification of Skills/Competences, Qualifications and Occupations (ESCO), Social Dialogue, Sector Skills Councils, etc. just to mention a few challenges for EC-OE anno 2014.

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Keywords: Outdoors; Active Leisure; Outdoor animator; ELESA project; EQF; ESCO

Title: Stressors and Coping of Elite Ultra-Endurance Mountaineers.

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Aim

Although research has categorised sports related stressors (Fletcher & Sarkar, 2012; Hanton, Fletcher, & Coughlan, 2005), exploration of stressors relating to *ultra-endurance* athletes is minimal (Weston, Thelwell, Bond, & Hutchings, 2009). Similarly, research involving elite mountaineers within an ecologically valid approach is rare (e.g. Cobley, McKenna & Allen, 2006). Considering the current gaps in the literature the purpose of the present investigation was to examine the stressors experienced by elite mountaineers and explore the specific coping mechanisms these individuals utilised, and found effective, while climbing K2.

Methods

A mixed methods approach was implemented. Individual semi-structured interviews were conducted on location in Pakistan, during a K2 expedition, thereby ensuring ecological validity. Interviewed climbers involved 10 international, experienced elite mountaineers who had summited a total of fifty-two 8,000 metre peaks between them. In addition, immediately following the interviews, participants completed the Athletic Skills and Coping Inventory for Sport questionnaire (ASCI-28; Smith et al. 1995). Analysis procedures of the qualitative data involved thematic coding (Robson, 2005). Results directed the development of a model for coping within endurance sports.

Results

Climbers reported stressors emerging from both personal (e.g. pain and fatigue) and organisational (e.g. team issues) sources. The cohort reported using wide ranging coping strategies to manage the encountered stressors, from emotion, approach, problem and appraisal based coping approaches. The climbers appeared to utilise coping tools automatically, without conscious thought, congruent with previous research (Nicholls, Remco & Polman, 2007; Poliseo & McDonough, 2012). Findings from the current investigation highlighted emotion based coping to be the climbers most reported coping style, involving the individual attempting to cope with stressors without altering the environmental situation. This conflicts with previous research, where problem focused coping proved most effective (Gaudreau et al. 2002; Nicholls et al. 2006). Effective coping skills were identified to include self-talk, goal setting, imagery and mental toughness. Climbers coping needs for endurance mountaineering were enhanced by attention based constructs such as association, dissociation and mindfulness which played pivotal roles in the climbers' coping mechanisms. The value of techniques such as mindfulness and meditation have received minimal exploration within endurance research, however this research

demonstrates their effectiveness for mountaineering based coping. In addition, climbers discussed the benefits of coping mechanisms attained through experiential learning from positive prior experiences and simulation training. These results steered the development of a coping model which outlines a comprehensive structure athletes can use to guide their personal abilities for coping.

Conclusion

Recommendations for future climbers include enhancing their coping 'toolbox' by incorporating appropriate cognitive and practical coping tools presented within the coping model. Following this structure will assist climbers reaching their personal peak performance levels.

Keywords: stressors, coping, ultra-endurance, elite, mountaineering

Outward Bound in New Zealand: 1962- 2012

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Aim

This paper highlights Outward Bound New Zealand's (OBNZ) core values that have remained consistent over the past fifty years. The theoretical framework for this study was the work of Edgar Schein on organisational culture and leadership. He asserts that artefacts located at the surface of a culture, which are visible or tangible but sometimes not decipherable, are realisations of underlying values that in turn are manifestations of deeper assumptions.

Methods

Primary data for this case study was obtained through the use of semi-structured, in-depth interviews (14) with past and present School and Executive Directors. The information was analysed according to well-established principles of qualitative data analysis: data reduction, data display, conclusion drawing and verification. The credibility and dependability of the research was enhanced by triangulating the information involving relevant documentation (OBNZ annual reports), the data collected from the interviews, and the researcher with his previous extensive experience of OBNZ.

Results

Important visible symbols of the OBNZ brand are the compass logo and motto of '*to serve, to strive and not to yield*'. A key finding is that OBNZ has stayed true to the original values of Kurt Hahn, which have been reviewed and formalised through the 'fundamentals' of greatness, compassion, responsibility and integrity. The core course assumption is still focused on self-discovery and the OB motto '*there's more to you than you think*'.

Conclusion

These findings provide insight into the culture within the OBNZ organisation, which has been largely independent of political influence, but responsive to the current needs and expectations of society. It is anticipated that these findings will be transferable to other contexts and assist in the organisational development of effective leadership and culture.

A recreation management study program: graduate's evaluation on professional occupation and competencies

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Aim

Occupational professions in the outdoor recreation sector have huge variety in content, form and level. Occupational qualification systems are very different all over the world despite the theoretical principles expressed in highly valued professional literary sources. An important process in the creation of the common European lifelong learning area is the development and implementation of the European Qualifications Framework for Lifelong Learning that serves as a reference framework for different formal education qualifications (general education, vocational education and training, higher education) and occupational qualifications (sector qualifications). This present article focuses on employment and the evaluation of professional competencies of graduates of a recreation management study program at Tallinn University.

Methods

Graduates of the recreation management program from 2009-2013 (186 students) were addressed via e-mail (obtained from the information system of the institute - social media networks and graduates social web-based networks were used for additional dissemination). A web questionnaire (formulated as Google Docs file) was prepared, based on previous similar research in 2009 and 2007 in the institute and a national research project '**The Estonian 2009 Higher Education Graduate's Research**'. **The questionnaire consisted of three parts: 1) employment during studies and after graduation; 2) evaluation of professional competencies obtained during studies; 3) feedback on the organization and management of the study program. The questionnaire was sent to 184 students (2 students had no e-mail addresses) on the 1st of February 2014. By the end of February 60 respondents had replied, 32 % of the overall sample. Data analyses were executed using the SPSS Statistics 22 program.**

Results

During their bachelor's degree studies, 88,4% of the graduates were employed. The main reasons for working were not coping economically and desire for extra funds. During the bachelor studies one third of the graduates were employed in fields very closely or largely related to recreation management. However, many graduates believed that working hindered their participation in studies and completion of the study program in normal time. Currently, more than half of the graduates are working full time. Acquired specialty and professional trainings have helped the most in getting the job. 39,7% of graduates said that their work is very closely or largely related to recreation management. The highest number of graduates work in art, entertainment and leisure fields. In choosing the job, the most

important factors to graduates were good development opportunities, nice colleagues and good salary. Graduates evaluation of their personal competences coincide with evaluation given on competences necessary for the professional field: problem solving, decision-making, effective communication and planning. Still, recreation management graduates consider the continuation of studies to be crucial: 77,3% have acquired, are acquiring or are planning to acquire a master's degree. The graduates highlighted the deficiencies in the study program in the area of entrepreneurship, management and organization of events, knowledge in human behavior, but less importance was paid to technical skills. Three quarters of respondents found that the proportion of practice was not enough.

Conclusion

Employment during study is necessary for economic reasons to cope with everyday life. The more the current professional occupation is related to the studies completed, the more satisfaction with their studies was expressed. At the same time the variety of titles of occupational professions shows the interdisciplinary aspect of the recreation management field. Graduates have expressed their knowledge in professional occupations through competencies necessary to the field through their own experiences, which mostly coincides with the theoretical definitions of outdoor recreation managers. Despite higher education having a more academic approach to the formation of professional competencies, graduates highlighted the deficiency on practical work based and experiential learning opportunities.

Risk taking propensity in downhill mountain bikers

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Aim

Extreme sports are characterized by increased degree of risk and danger. They are practiced due to a desire to overcome the difficulties, to experience new, strong unusual sensations in conditions of increased risk and a sense of achieving something special. One fairly young extreme sport is mountain biking. This kind of sport or leisure activity is practiced by people who are generally eager to take any risk or find themselves in dangerous situations. The most important predisposition to engage in those activities is the courage expressed in risk taking propensity. Risk taking propensity is a personality trait that affects human decisions in risky situations. Depending on its severity there can be observed behavior more or less risky. The aim of the study is to assess the level of propensity to risk behaviors of people involved in downhill mountain biking.

Methods

The questionnaire constructed by Ryszard Makarowski was used to measure risk taking propensity and frequency of risky behavior regarding to health. The study was based on persons taking part in a downhill competition in September and October 2014 in Poland. The examination of a minimum 40 person was planned.

Results and conclusion

The details of the results and conclusion will be presented on conference.

Service learning – an innovative strategy in outdoor activities education at universities

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Abstract

The paper provides general characteristics of the service learning concept as an integral part of higher education, its goals (in relation to students, organizations, and community) and core components (preparation, service/action, reflection, and recognition), implemented in the outdoor environment. It presents experiences with the implementation of service-learning at Matej Bel University in Banská Bystrica and describes a study course Service Learning 1 and Service Learning 2 which are open for all students of this university. Both the structure and the content of these new courses are based on the specific needs of the students. The first part of the course is oriented to theoretical and practical preparation and the development of knowledge and skills students need for part two, called Activity. In this part the students plan, organize, and carry out activities in the community involving outdoor organizations. The goal of the course evaluation is to identify the competencies of the students developed through the service learning activities. All students fill in a self-reflection questionnaire at the beginning and at the end of the course. The paper provides the results of the survey carried out among students at the beginning of the course.

Prophylactic Effect of Erythropoietin Injection to Prevent Acute Mountain Sickness: An Open-Label Randomized Controlled Trial

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Aim

This study was performed to evaluate whether increasing hemoglobin before ascent by prophylactic erythropoietin injections prevents acute mountain sickness (AMS).

Methods

This study was an open-label, randomized, controlled trial. 39 healthy volunteers with hemoglobin ≤ 15.5 g/dL were divided randomly into erythropoietin (n = 20) and control (n = 19) groups. Epoetin alpha 10,000 IU injections were given weekly for four consecutive weeks, starting 5 weeks before departure. The last injection was given 7 days before departure. On day 1 and day 28 (7 days after the last injection), oxygen saturation (SaO₂) and hemoglobin were measured. After arriving at the 3,230 m high lodge at Deurali on day 33 of the study, all subjects were given sildenafil citrate 50 mg p.o. before sleeping, and on the following morning. This treatment was repeated when the subjects arrived at the 4,130 m high lodge at Annapurna base camp on day 34. Subjects who met the criteria for an immediate descent were treated with an intramuscular injection of dexamethasone 5 mg. The subjects departed Seoul on day 30 and arrived at Annapurna base camp (4,130 m) on day 34. AMS was diagnosed when headache and Lake Louise score (LLS) of ≥ 3 were present. Immediate descent criteria followed US Army recommendations.

Results

The two groups differed in hemoglobin levels on day 29 (15.4 ± 1.1 vs 14.2 ± 1.0 g/dL, $P = 0.001$). At Annapurna base camp, erythropoietin group had a significantly lower mean LLS, AMS incidence, and number of subjects who met immediate descent criteria. Multiple logistic regression analysis showed that SaO₂ $< 87\%$ and control group, but not hemoglobin < 15.0 g/dL, independently predicted satisfaction of immediate descent criteria. During the night in the Annapurna base camp, one woman in the control group complained of symptoms of moderate high altitude pulmonary edema (HAPE); headache with cough, dyspnea at rest. All participants returned safely and there were no adverse effects of EPO such as thromboembolic events.

Conclusion

Erythropoietin may be an effective prophylaxis for AMS in an actual mountain environment. Comparison of EPO with well-established means of prophylaxis such as acetazolamide or dexamethasone needs to be clarified in future study.

Socio-mapping as a method exploring social relationships in a school class

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Aim

The aim of the contribution is to present the use of socio-mapping in assessing social relationships.

Methods

A class of 14 year two high school students volunteered to the study. The class participated in a 3-day outdoor course focused on the development of group dynamics and cooperation. The participants filled in a questionnaire before and after the course. The questionnaire was based on rating classmates according to their preferential relationships. The strength of these relationships and their structure was transformed visually using a socio-map.

Results

The sum of ratings given by the whole class increased from 1295 to 1368 after the course, which indicates higher positive assessment of relationships in the group. The socio-maps show the class to be more cohesive after the course, which is represented by the positions and shorter distances between the members and by the change of the general map colour. The network of the links shows more mutual relationships and fewer members separated from the class after the course.

Conclusion

Socio-mapping is a method similar to sociometry. Its big advantage is its lucidity and easy interpretation, particularly in bigger groups. It can be used for examining different group variables. In the current study, socio-mapping seems to have provided quantifiable changes in the social relationships in a school class after outdoor course participation.

Key words: sociometry, group dynamics, outdoor course

Nordic walking: psychosocial improvements and functional capacity in women with breast cancer

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Background

Breast cancer is the most common type of cancer in the European Union and the most common tumour among women all around the world. The incidence is increasing, affecting 1.2 million people each year and it is considered as a chronic disease because there is a high survival rate. However, the risk of relapse is high even 20-30 years after diagnosis (Cantarero I. et al., 2011). There is no right prescription and structure of physical activity for this population. 50% of patients treated with chemotherapy plan to increase their physical activity and they are interested in receiving appropriate intervention. Treatments experience functional deficit in terms of mobility and decreased muscle strength, reducing physical activity by approximately 11% in comparison to the pre-disease period. In some cases the level of physical activity reduction can be up to 50% (Hanuszkiewicz, Malicka & Wozniowski, 2014). Physical activity has an important role in improving quality of life and prevents or delays the onset of other diseases in cancer survivors. Physical activity causes improvements in aerobic capacity and muscle strength and reduces fatigue, a key to recovery (ACSM, 2010).

Nordic walking programs provide physiological benefits, improve upper body muscle development, cardiopulmonary capacity, energy and circulation (Gonzalez Castro, 2013; Johnson & Johansson, 2014). As a recreational activity, Nordic walking can reduce the level of depression and anxiety and improve the mental state and social mood, producing a positive effect on the quality of life (Hanuszkiewicz, Malicka & Wozniowski, 2014). It is also advisable during adjuvant treatment and in women with breast cancer and lymphedema (Malicka et al., 2011; Johnson & Johansson, 2014).

Case Report

There is scientific evidence indicating that exercise improves functional and psycho-social capacity in women with breast cancer who have completed adjuvant treatment, but there are few studies aimed at women who are undergoing treatment and none in patients with stage IV (of metastatic breast cancer). A multidisciplinary team, oncologist, psychologist, physiotherapist and a professional of physical activity, will prescribe Nordic Walking as a useful type of physical activity depending on the different stages of the disease.

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The effect of specific fitness for a horse rider on competitive performance in equestrian eventing

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Introduction

Training and improvement of well-known movement forms in horse riding occurs based on the development of general fitness which is acquired 'by chance' at the time of the training. The abilities of the equestrian pair can be determined through the relationship between the results of official competitions and one or several characteristics of the pair.

Methods

Examinations were carried out among members of the equestrian eventing national team with similar level of technique and tactics. The examinations evaluated 9 persons aged 26 to 35 years with horse riding experience from 11 to 18 years. Measurement of selected characteristics of specific fitness were based on the following tests: Wolański test, Lovett test, level of abduction of lower limbs, Thomayer test, Hindermayer test, endurance of dorsal muscles and Master step-test. The results were recorded during individual tests obtained during official eventing competitions. Distribution of the levels of specific fitness characteristics during the tests varied individually. However, their highest level occurred most frequently in the second year of measurements.

Conclusion

The effect of specific fitness abilities on athletic fitness is varied and, in individual cases, matches the following pattern: very high effect: level of lower limb abduction and motor coordination; high effect: endurance of dorsal muscles; medium effect: endurance of lower limb adductors and general flexibility; low effect: endurance of abdominal muscles.

Keywords: fitness, equestrian training, horse riding

Experiential Education in Czech Educational Journals: An analysis of Methodological Procedures

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Aim

The aim of this study is to analyze the methodological procedures used in the experiential education field through review of empirical studies published in Czech educational journals (*Pedagogika*, *e-Pedagogium*, *Pedagogická orientace*, *Gymnasion*).

Methods

This qualitative study involved document content analysis. Keywords characterizing experiential education, *zážitková/prožitková pedagogika*, *pedagogika zážitku* and experimental learning, were highlighted in each chosen article (i.e. these keywords must be in either title or subtitle of the articles). Analysis included journals *Pedagogika* (176 issues from 1977 to 2013); *Pedagogická orientace* (81 issues, 13 issues were not found, from 1990 to 2013); *e-Pedagogium* (54 issues from 2001 to 2013); *Gymnasion* (25 issues from 2004 to 2013). The last analyzed issues were published at the end of May 2013.

Results

14 articles were found from a total of 375 of analyzed issues (from 2003 to 2013). 13 issues fulfill the conditions (at least one article contains at least one stated keywords). Only 6 studies mentioned the terms *zážitková/prožitková pedagogika*, *pedagogika zážitku* and experimental learning in the title or subtitle. These articles were theoretical only, thus empirical research method was not used.

Conclusion

Whilst academic interest in experiential education is evident through a recent increase in defended student theses, the findings of this current study indicate that subsequent articles are not being published in Czech.

Using interpretative phenomenological analysis in experiential education research

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Aim

Plenty of qualitative research, using many approaches, has been undertaken in recent decades, in the field of experiential education, especially in English-speaking countries. Interpretative phenomenological analysis can be very suitable for research in the field of experiential education. In this contribution our primary aim was to describe the possibilities of using interpretative phenomenological analysis as a research method in experiential education. The secondary aim was to highlight similarities in epistemological and ontological foundations of both experiential education and interpretative phenomenological analysis.

Methods

For the purposes of our study we used conceptual analysis of ontological and epistemological foundations of both experiential education and interpretative phenomenological analysis. We also carried out a literature review on epistemology and methodology of qualitative research in the field of experiential education.

Results

Interpretative phenomenological analysis is a method of qualitative analysis, which is underpinned by three theoretical foundations: phenomenology, hermeneutics and idiography. Interpretative phenomenological analysis is phenomenological in its effort to get as close as possible to the lived experience of respondents. It comes from hermeneutics in its accent on interpretation of both respondents and researchers. Finally it is idiographic in its focus on details, individuals and the way how individuals make sense of their experiences. In the case of interpretative phenomenological analysis, researchers use semistructured interviews to get as close as possible to the lived experience of respondents. Considering ontological and epistemological foundations, interpretative phenomenological analysis and experiential education have a lot in common. In experiential education the experience of an individual and his own interpretation is central. The interpretative manner is also stressed in the reflective part of the experiential education learning cycle. These common attributes makes interpretative phenomenological analysis very useful in experiential education research.

Conclusion

We outlined the ontological and epistemological connections between interpretative phenomenological analysis and experiential education. Both the educational approach and research methodology share its philosophical foundations. Interpretative phenomenological analysis is a suitable approach towards capturing the complexity of processes taking place in experiential education. The lived experiences of individual participants sensitively embedded in their life stories and the way how they understand their

experiences need to be considered in the case of research tending to capture the complexity of experiential education.

Computer Connected Force Platform Performance Assessment and Training Tool for Rock Climbing

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Aim

Traditional training on a hanging board is widely used for rock climbing. However, it does not allow precise measurement of training intensity variation. Pressure sensors allows this level of precision and variability [1,2] but are not widely available. Therefore, we developed software intended to use with a widely available force platform (FP) as specific performance assessment and training tool (PATT) for rock climbing.

Methods

General principle: Effort calculation is based on the partial weight measured on the FP subtracted by the measured total body weight (BW).

Protocol:

- The user stands on the FP and get his/her weight measured.
- A hang board disposed directly over the FP is used for suspension exercises.
- The foot of the user remains on the FP throughout the suspension exercises.
- Percentage of BW and absolute weight lifted are calculated by the PATT.
- Direct visual feedback is provided to the user on the computer interface.
- The FP error is about one kilogram [3].

Results

Established blue tooth connection with the FP receives the reaction with the floor data. The Nintendo Wii Balance Board ©, the Snake Byte Fitness Board ©, the Big Ben Balance Board © and a few other FPs are compatible with the PATT software. The tests' information is saved in a server allowing sharing of information with others. A beta release of the software has been available since the 1st of November 2014 for coaches, researchers and medical purposes.

Conclusion

Training of foot balance using the PATT improves the control and precision of training intensity. This activity provides a safe and stimulating environment for performance enhancement specific to rock climbing. A drawback of this system is that the forces in the balance plane balance are not measured by the PATT. However this bias is systematic toward underestimation of measured effort. The difference between real effort and calculated effort is most likely minimal with the disposition of the FP

under the hang board. This PATT has the advantage of being widely available. This tool allows personalized rock climbing training for users of all levels. It further offers endless possibilities of connectivity with smartphones and computers. In the future, modules will allow assessment of users climbing specific ability.

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The Motivation of Selected Outdoor Sports

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Aim:

The aim of the study is to achieve a deeper understanding of motivation of selected outdoor sports and its components. The study tries to divide motivational components into categories to compare the importance for doing outdoor activities for each sport.

Methods:

We used the questionnaire method that was based on Beier's study (2001). The questionnaire was divided on the basis of monitoring the components of motivation - sensory perceptions, aesthetic perceptions, feelings associated with a physical activity, stress and activation, release and regulation of mood, flow, efficiency, social perceptions and health aspects. 350 respondents at the age between 20 to 75 years were asked. They were the performers of mountain biking, sport climbing, hiking, cycling, alpine skiing, cross country skiing, snowboarding and downhill skiing. The questionnaires were distributed personally.

Results:

We have found that we are able to define a universal type of outdoor activities athletes. It is an individual for whom movement in nature in company of friends is important and physically and mentally relaxing. This individual also actively seeks for healthy activities which can improve general physical and mental performance. The most important motivation factor for bikers is the perception of the beauty of nature and maintaining a good physical condition. The most important motivation factor for road cycling athletes is a good physical condition. The most important factor for hikers is discovering the beauty of nature, for skialpinists it is stay in nature, the joy of the movement and freedom. The most important factors for climbers are taking challenges, feeling of tension and being a part of a social group. Different reasons for doing outdoor activities have skiers and snowboarders - the main motivation factors are concentration on the activity and the feeling of control over the undertaken activity.

Conclusion:

The most prominent and the most important "motivators" of climbing, alpine skiing and mountain biking are tension and activation that are connected with adrenaline and challenge. The general factor for doing climbing is excitement with the elements of flow together with doing an interesting activity in a beautiful natural environment. Our results support the results of Beira (2001) and Ewert (1985, 1995) and point to the fact that none of the selected outdoor sports has a definite and unique motivational profile, as it is at High risk sports (Castanier, Le Scanff, Wodman 2010).

Key words:

outdoor sports, motivation, motivation factors, flow